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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,976	06/27/2003	David E. Rodrigues	RD28584-1	6404
23413	7590	10/12/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			VIJAYAKUMAR, KALLAMBELLA M	
			ART UNIT	PAPER NUMBER

1751

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,976

Applicant(s)

RODRIGUES, DAVID E.

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim-1 was amended that overcomes the rejection of claim-1 under 35 USC 112-II paragraph in the last office action. Claims 1-8 and 10-19 are currently pending with the application. Claims 14-19 were withdrawn from consideration.

The examiner has considered the IDS filed on 0718/2006.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1751

1. Claims 1-8, 10 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Campbell et al (US 6,388,046).

Campbell et al teach making of a flame retardant resin comprising a blend of different polymers comprising (a). 26.5 parts of first bisphenol-A **homopolycarbonate** <polymer/resin>, (b). 61.8 parts second bisphenol-A homopolycarbonate with a molecular weight of about 71% of the first polycarbonate <low-mol.wt/low-melting resin>, (c). 4 parts ABS copolymer, (d). 5 parts **XPP** <**phosphoramidate**, flame retardant/processability-enhancer/plasticizer with a low glass transition point> and (e). 2.75 parts conventional additives. The conventional additives included titania and PTFE, carbon fibers, **carbon nanotube** and carbon black. (Abstract; C-21, Ex-7; C-15, Ln 1-41; C-20, Ln-20-21; C-18, Ex-1; C-19, Table-1, Ex-1,4; C-16, Ln: 4, 10-11). The prior art also teaches the addition of a plasticizer in the composition (C-16, Ln 4). The prior art further teaches adding phosphate esters such as **RDP** with the phosphoramidate, with improved processability and plasticity, and reduced viscosity, and the examiner construes the XPP phosphoramidate with a low glass transition point of at least 0C to further meet the limitation of plasticizer in the claims (C-19, Ex-2; C-15, Ln 1-16; 36-40; See: Specification: US 2004/0262581; Para-0045; Example-1:0059-0060). The prior art further teaches the use of **RDP** <plasticizer > in the composition (C-19, Ex-2). The prior art further teaches blending the components in a mixer/twin-screw-extruder involving **melt processing** of the components followed by **injection molding** of the blend forming a test specimen (C-17, Ln 33-39). With regard to the viscosity needed to effect the ratio of resistivities in the claim-1, the prior art process, the components used in the process and the utility of the product (C-1, Ln 31-43) are identical to that by the applicants (Spec: Para 0057), and the claimed ratio will be anticipated. The multi walled carbon fibrils are the most common nanotubes (See, Nahaas-US 5,651,922, C-4, Ln 7-15). With regard to the article in claim 13, the prior art teaches a specimen and when the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

Art Unit: 1751

The reference is anticipatory.

In the alternative that the disclosure by Campbell be insufficient to arrive at the limitations of the instant claims by the applicants, it would have been obvious to optimize the process conditions including viscosity with reasonable expectation of success, because the prior art is concerned about reducing the viscosity and teaches the benefits of reduced viscosity with improved processability (C-15, Ln 37-40). Generally, differences in concentration, temperature, or viscosity will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

2. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al (US 6,388,046).

The disclosure by Campbell et al on the composition and method of making the composition as set forth in rejection-1 under 35 USC 102(b) is herein incorporated.

The prior art is silent about the variation of viscosity to attain the in the desired resistivity ratios per the claims.

However, the prior art teaches forming a composite and controlling its properties in terms of melt viscosity (C-21, Ex-7) and to optimize the process controls such as reduced viscosity resulting in enhanced processability. The prior art further teaches the benefits of reduced viscosity with improved processability (C-15, Ln 37-40), and it would have been obvious to a person of ordinary skill in the art to optimize the process conditions to attain desired properties of the compositions with reasonable expectation of success, because the prior art teaches the utility of the product in electronic goods (C-18, Ln 1-26) that is the same as that by the applicants.

3. Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by or under 35 U.S.C. 103(a) as being unpatentable over Creehan (US 5,445,327).

Art Unit: 1751

Creehan teaches a composite comprising a polymer such as polyester, polyamide or polyurethane; a filler comprising carbon fibrils and carbon black; and a viscosity modifier such as a solvent (MEK, water mineral oil) or a reactive diluent (styrene, acrylates), which is made by mixing the components in a stirred ball mill with shear and impact forces and **substantially uniformly dispersing the filler throughout the matrix** material, and this will inherently meet the ratio of resistivities (Abstract, Col-1, Ln 36-Col-2, Ln 48; Col-3, Ln 2-59). When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Creehan et al be insufficient to arrive at the claimed article, it would have been obvious to a person of ordinary skill in the art to optimize the degree of dispersion of particles in the matrix by varying the milling time with reasonable expectation of success, because the prior art is suggestive of tailoring degree of uniformity with improved composite properties (Col 2, Ln 51-59; Col-4, Ln 12-18; Table-1).

Response to Arguments

Applicant's arguments filed 07/18/2006 have been fully considered but they are not persuasive to overcome the rejections cited in the last office action. Applicants argue that Campbell teaches a flame-retardant and not a conductive material is not persuasive, because the presence of the conductivity in the prior art composition will be inherent due to the presence of conductive additives (Response, Pg-7, Para-1). Applicants argue that Campbell fails to disclose heating the polymer to a temperature greater than T_g or the melting temperature is not persuasive, because prior art clearly teaches melt-blending of the components (C-17, Ln 33-39) (Response, Pg-7, Para-1).

Applicants argue that a plasticizer is "a low molecular weight organic or inorganic species which can facilitate a reduction in melt viscosity during blending" and further argue that phosphoramidate is not

Art Unit: 1751

disclosed as a plasticizer" in the list of compounds cited by them (Response, Pg-7, Para-2). Applicants further argue that a phosphoramidate was added as a flame retardant and does not significantly lower the Tg of the base polymer (Response, Pg-8, Para-1). The limitation of "comprising" in instant claim-1 does not limit a plasticizer to the specific compounds listed in the specification by the applicants and they are merely exemplary examples. Further, the prior art clearly teaches adding phosphoramidate either individually or with phosphate esters such as **RDP** with improved processability and plasticity, and reduced viscosity (C-15, Ln 1-40), and teaches an example using RDP (C-19, Tb-1, Ex-4) as cited by the applicants. Applicants further argue that XPP does not lower the Tg of a polymer as effectively as RDP is not persuasive, because the extent of lowering Tg is not the limitation of the instant claim, and the data clearly teaches the lowering the Tg of polycarbonate (Campbell, C-19, Table-1; Response, P-8, Para-1-2). Phosphoramidate is a well known plasticizer used with polymers (See Michaels et al, US 3,324,068; C-2, Ln 10-11, 20-22). Further, Brown et al teach plasticizers that double as flame retardants include compounds containing at least one of oxygen, phosphorus and Nitrogen atoms (US 4,680,329; C-7, Ln 21-26), and XPP, a phosphorus compound with a low glass transition temperature and similar in structure to RDP (Campbell, C-18, Ln 60-65), clearly meets the limitation of a plasticizer.

Applicant's further argue that the prior art is silent about the varying viscosities is not persuasive (Res, Pg-9, Para-1), because prior art is concerned about reduced viscosity with improved processability and reduced load on the extruder, and melt-blending the components (C-15, Ln 37-40), and a person of ordinary skilled in the art would appreciate the reduction of load on the on the extruder/mixer with lowered generation of heat by reduced viscosity and motivated to optimize it (Miyamoto et al, US 6,833,397; DETX 142).

With regard to the article in claim-13, applicants fail to patentably distinguish their product-by-process article over the prior art article, and recite the benefits of their process (Response, Pg-10, Para – 3-4).

For the reasons set forth above, applicant's fail to patentably distinguish their process and the product over the prior art.

Art Unit: 1751

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

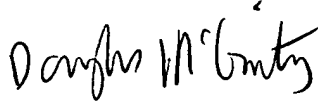
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8.30-6.00 Mon-Thu, 8.30-5.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KMV
September 30, 2006.


DOUGLAS MCGINTY
SUPERVISORY PATENT EXAMINER
1751